

FORM PTO-1449 (Modified)

LIST OF INFORMATION PROVIDED  
BY APPLICANT

(Use several sheets if necessary)

**TITLE:** METHOD AND APPARATUS FOR VISUALIZATION  
OF 3D GEOSCIENCE DATA USING LIT OPACITY VOLUMES  
WITH SHADING**INVENTORS:** DMITRIY G. REPIN & MARK S. PASSOLT**ATTY. DOCKET  
NO.**

94.0041

**SERIAL NO.**

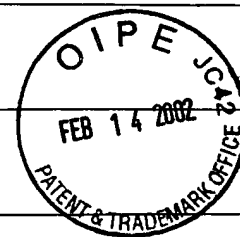
10/017,560

**APPLICANT**

Dmitriy G. Repin et al

**FILING DATE**

12/14/2001



## REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Patentee
Kn	1	4,835,712	5-30-1989	Drebin
Kn	2	5,766,129	6-16-1998	Mochizuki
Kn	3	6,219,059	4/17/01	Argiro
Kn	4	6,130,671	10/10/00	Argiro
Kn	5	5,986,612	11/16/99	Argiro

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## FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Translation Yes No	

OTHER INFORMATION PROVIDED (AUTHOR, TITLE, DATE, PLACE OF PUBLICATION, PERTINENT  
PAGE, ETC.)

Kn	6	DEREK R. NEY et al., "Volumetric Rendering of Computed Tomography Data: Principles and Techniques", IEEE Computer Graphics & Applications, March 1990, p. 19-27
Kn	7	ROBERT A. DREBIN et al., "Volume Rendering", Computer Graphics, Vol. 22, No. 4, August 1988, p. 110 - 119
Kn	8	GERALD D. KIDD, "Fundamentals of 3-D Seismic Volume Visualization", The Leading Edge, June 1999, p. 702 - 710
Kn	9	TATUM M. SHEFFIELD et al., "Geovolume Visualization Interpretation: Color in 3-D Volumes", The Leading Edge, June 1999, p. 668 - 674.
Kn	10	RÜDIGER WESTERMANN, et al., "Efficiently Using Graphics Hardware in Volume Rendering Applications", Computer Graphics Proceedings, Annual Conference Series, 1998, p. 169 - 177.
Kn	11	MICHAEL MEIBNER et al., "Enabling Classification and Shading for 3D Texture Mapping based Volume Rendering using OpenGL and Extensions", Proceedings of the Conference on Visualization, 1999, p. 207 - 214.

**EXAMINER**


C. M. Nguyen

**DATE CONSIDERED**

9-28-03

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609;**Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.**

- The attached cited information should not be construed as an admission that any of the above items are prior art to the subject invention.
- This is not a representation that a search has been made.

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<b>INVENTORS:</b> DMITRIY G. REPIN & MARK S. PASSOLT				FILING DATE 12/14/2001			
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<i>kn</i>	12	VICTORIA INTERRANTE et al., "Rendering", Department of Computer Science, The University of North Carolina at Chapel Hill, p. 41 – 65.					
<i>kn</i>	13	KARL HEINZ HOHNE et al., "Voxel-based Volume Visualization Techniques", Institute of Mathematics and Computer Science in Medicine, University Hospital, Eppendorf, University of Hamburg, p. 66 – 83.					
<i>kn</i>	14	KARL HEINZ and RALPH BERNSTEIN, "Shading 3D-Images from CT Using Gray-Level Gradients", Transactions on medical imaging, Vol MI-5, No. 1, March 1986					

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